

# Arable Weeds and Management in Europe

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## Abstract

“Arable Weeds and Management in Europe” is a collection of weed vegetation records from arable fields in Europe, initiated within the Working Group Weeds and Biodiversity of the European Weed Research Society (EWRS). Vegetation-plot data from this scientific community was not previously contributed to databases. We aim to prove the usefulness of collection for large scale studies through some first analyses. We hope to assure other weed scientists who have signalled willingness to share data, and plan to construct a full data base, making the data available for easy sharing. Presently, the collection has over 60,000 records, taken between 1996 and 2015. Many more studies for potential inclusion exist. Data originate mostly from studies exploring the effect of agricultural management on weed vegetation. The database is accompanied with extensive meta-data on crop and weed management on the surveyed fields. The criteria for inclusion were a minimum amount of information on the cultivated crop, and a georeference. Most fields were surveyed repeatedly, i.e. transects, multiple random plots, or repeated visits. All surveys aimed to record the complete vegetation on the plots. Sometimes, taxa were identified only to genus level, due to survey dates very early in the vegetation period. Plant taxonomy is standardized to the Euro+Med PlantBase.

## Keywords

agriculture, arable weed, Europe, management, segetal plant, vegetation-plot database

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# GIVD Fact Sheet

|   |   |  |                            |
|---|---|--|----------------------------|
| GIVD Database ID: EU-00-033   |   | Last update: 2020-12-02                  |                            |
| <b>Arable Weeds and Management in Europe</b>  |   | <b>Web address:</b>                      |                            |
| <b>Database manager(s):</b> Jana Bürger (jana.buerger@uni-rostock.de)   |   |  |                            |
| <b>Owner:</b> Members of the EWRS Working Group Weeds and Biodiversity  |   |  |                            |
| <b>Scope:</b> Weed vegetation survey data, complemented with data on agricultural management of the surveyed fields.  |   |  |                            |
| <b>Abstract:</b> Arable Weeds and Management in Europe is a collection of weed vegetation records from arable fields in Europe, collected through an initiative within the Working Group Weeds and Biodiversity of the European Weed Research Society (EWRS). Plot-vegetation data from this particular scientific community has not previously been collected in a data base. The initiators aim to prove the usefulness of collection for large scale studies through some first analyses, to assure other weed scientists who have signaled willingness to share data. Presently, the collection has 59839 records, from approx. 5000 fields, starting from the early 1990s. Many more studies for potential inclusion exist. Data originate mostly from studies exploring the effect of agricultural management on weed vegetation. It is accompanied with extensive meta-data on crop and weed management on the surveyed fields, provided by the farmers. The criteria for inclusion were a minimum requirement of meta data on the cultivated crop, and a georeference to the location. Plot sizes range mainly from 1m² to 2000m², but sometimes a larger area of the field was surveyed (0.5-1ha). Most fields were surveyed repeatedly, for example with 10 plots per fields, transects from edge to interior, or with multiple visits per cropping season. All surveys aimed to record the complete vegetation on the plots. Sometimes, taxa were identified only to genus level, due to survey dates very early in the vegetation period. The taxonomy was harmonized according to the Euro+Med database. |   |  |                            |
| <b>Availability:</b> not yet available  |   | <b>Online upload:</b> no                 | <b>Online search:</b> no   |
| <b>Database format(s):</b> Excel  |   | <b>Export format(s):</b> Excel, CSV file |                            |
| <b>Plot type(s):</b> normal plots, time series  |   | <b>Plot-size range:</b> 0.125 to 20000   |                            |
| <b>Non-overlapping plots:</b><br>41850  | <b>Estimate of existing plots:</b><br>80000                         | <b>Completeness:</b><br>52%              | <b>Status:</b><br>emerging |
| <b>Total no. of plot observations:</b><br>60475   | <b>Number of sources (biblioreferences, data collectors):</b><br>32 |  | <b>Valid taxa:</b><br>1260 |
| <b>Countries (%):</b> CZ: 0.5; DE: 13; ES: 1; FR: 32.5; GB: 40; HU: 5; LV: 1.5; PL: 1; IT: 2.5  |   |  |                            |
| <b>Formations:</b> Non Forest: 100% = Terrestrial: 100% (Non arctic-alpin: 100% [Anthropogenic: 100%])  |   |  |                            |
| <b>Guilds:</b> all vascular plants: 100%  |   |  |                            |
| <b>Environmental data (%):</b> altitude: 9; other soil attributes: 80; soil pH: 32; other attributes: soil type, soil texture, clay/silt/sand content, nitrogen content, soil organic matter content  |   |  |                            |
| <b>Performance measure(s):</b> cover: 15%; number of individuals: 85%   |   |  |                            |
| <b>Geographic localisation:</b> point coordinates less precise than GPS, up to 1 km: 90%; political units or only on a coarser scale ( above 10 km): 10%  |   |  |                            |
| <b>Sampling periods:</b> 1990-1999: 1.5%; 2000-2009: 88%; 2010-2019: 10%  |   |  |                            |
| <i>Information as of 2020-12-02 further details and future updates available from <a href="http://www.givd.info/ID/EU-00-033">http://www.givd.info/ID/EU-00-033</a></i>   |   |  |                            |

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